To determine the effects of Medklinn air sterilizers on human enterovirus 71 infectivity

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Test Conducted by:

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Test Method:

Cells and virus propagation:-

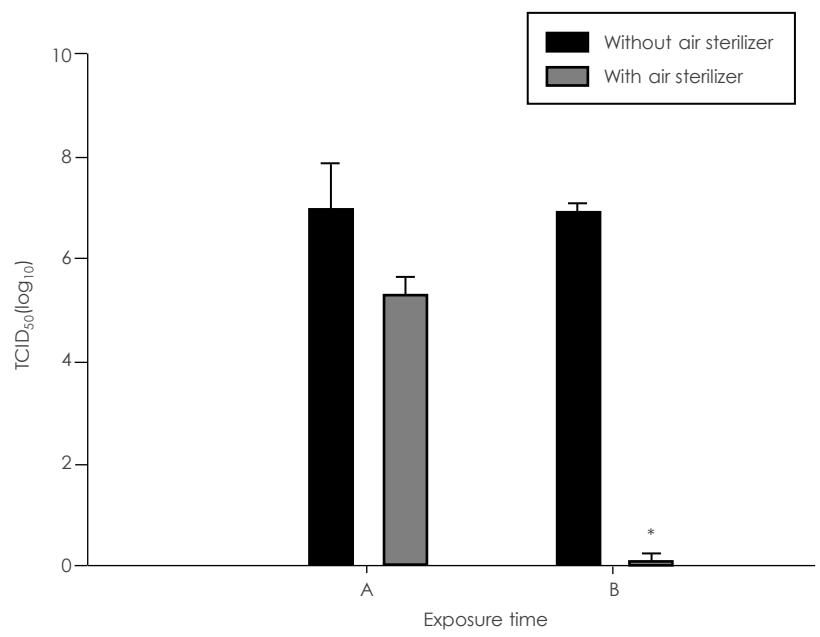
The virus was isolated from a patient who died of HEV-71-associated neurogenic pulmonary edema and the cells infected with HEV-71 virus were maintained in EMEM medium supplemented in 2% FBS

Air sterilizer effects:-

Virus inoculum was plated into 6-well plates (Falcon, USA) and left to dry in a cabinet with a dimension of 0.52 m3 in the presence of the air sterilizer placed at 59° angle from the plate or without as controls. At selected intervals the virus inoculum was recovered by adding serum free medium into each well. The inoculum was diluted in serum free medium (10-fold dilution) and used to infect Vero cells seeded into 96-well plates (Falcon, USA). The cells were incubated at 37°C in a 5% CO2 incubator for 3 days. Formation of cytopathic effects (CPE) was observed under a bright field microscope and the highest dilution that resulted in 50% tissue culture infective dose (TCID50) was determined using Reed-Muench formula.

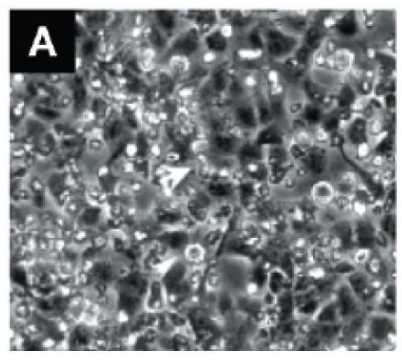
Test Results:

Virus infectivity was determined following exposure to air sterilizer effects for 5 hours (A) and 20 hours (B).



Cytopathic effects appeared in cells inoculated with virus recovered from the untreated controls (A). No cytopathic effects indicating no HEV-71 virus was recovered from the surface exposed to the air sterilizer for 20 hours (B).

Without Medklinn



With Medklinn